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July 16, 2015

By Certified Mail – Return Receipt Requested

Jeffery L. Griffith
President Alex Energy
2691 Little Birch Road
Sutton, WV 26601

Kevin S. Crutchfield, CEO
Alpha Natural Resources, Inc.
One Alpha Place
P.O. Box 2345
Abingdon, VA 24212

Re: 60 Day Notice of Intent to File Suit Under Clean Water Act Section 505(a)(1) for Violation of the Terms and Conditions of West Virginia NPDES Permit WV1021907 and 60-Day Notice of Intent to File Citizen Suit Under the Federal Surface Mining Control and Reclamation Act Section 520(a)(1) for Violations of Federal and State Regulations and Permit Conditions of West Virginia Surface Mining Permits S301405 and S300199

Dear Messrs Griffith and Crutchfield:

The Ohio Valley Environmental Coalition, Sierra Club and the West Virginia Highlands Conservancy, in accordance with section 505 of the Clean Water Act ("CWA") 33 U.S.C. § 1365 and 40 C.F.R. part 135, hereby notify you that Alex Energy, Inc. ("Alex") has violated and continues to violate, "an effluent standard or limitation" under Section 505(a)(1)(A) of the CWA 33 U.S.C. § 1365(a)(1)(A) by failing to comply with the terms and conditions of the West Virginia/National Pollution Discharge Elimination System ("WV/NPDES") Permit WV1021907. If within sixty days of the postmark of this letter, Alex does not bring itself into full compliance with the Act, we intend to file a citizen's suit seeking civil penalties for Alex's ongoing and continuing violations and for an injunction compelling it to come into compliance with the Act.

We further notify you, in accordance with section 502 of the federal Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. § 1270, and 30 C.F.R § 700.13, that Alex is in ongoing and continuing violation of certain federal and state regulations promulgated under SMCRA and the West Virginia Surface Coal Mining and Reclamation Act ("WVSCMRA") and certain permit conditions of its West Virginia Surface Mining Permits, S3014-05 and S3001-99, as a result of its discharges into Hardway Branch, which is a tributary of Twentymile Creek of the Gauley River. If within sixty days, Alex does not bring itself into full compliance with SMCRA, the regulations promulgated under SMCRA, the WVSCMRA, and the Surface Mining Permits S3014-05 and S3001-99, we intend to file a citizens' suit in federal court seeking an

injunction compelling Alex to come into compliance with the applicable statutes, regulations and permits.

I. Factual Background

February 22, 2002 the West Virginia Department of Environmental Protection (“WVDEP”) issued West Virginia Surface Mining Permit S3001-99 to Alex for its Hardway Branch Surface Mine, a 634-acre mine in Nicholas County, West Virginia. This permit included a Valley Fill No. 3, which drains in to Hardway Branch of Twentymile Creek of the Gauley River. Discharges from the pond below this were originally regulated as Outfall 007 of WVNDPES permit WV1019091, which was issued on February 25, 2002.

On December 14, 2006, the WVDEP issued West Virginia Surface Mining Permit S3014-05 to Alex for the PGM Surface Mine No. 1, another 634-acre surface mine in Nicholas County West Virginia. Valley Fill 3, originally of S3001-99 is now overbonded and included within the boundaries of both S3001-99 and S3014-05. Discharges from the pond below the fill are currently regulated pursuant to WVNPDES WV1021907, which was issued December 22, 2006. The discharge point from that pond is designated as Outfall 29.

Ionic pollution from alkaline mine drainage has been recognized as a cause of water quality impairment by EPA. In 2011, EPA scientists summarized the existing science connecting conductivity and biological degradation in an EPA report entitled, “A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams.” That report, which was peer-reviewed by top scientists on EPA’s Science Advisory Board, used EPA’s standard method for deriving water quality criteria to derive a conductivity benchmark of 300 $\mu\text{S}/\text{cm}$. *Id.* at xiv-xv. According to the species sensitivity distribution in the benchmark, on average, five percent of species are lost when conductivity rises to 295 $\mu\text{S}/\text{cm}$, over 50% are lost at 2000 $\mu\text{S}/\text{cm}$, and close to 60% are lost at 3000 $\mu\text{S}/\text{cm}$. *Id.* at 18. EPA considered potential confounding factors, including habitat, temperature, deposited sediments and pH, and concluded that none of them altered the relationship between conductivity and biological decline or the benchmark value of 300 $\mu\text{S}/\text{cm}$. *Id.* at 41, B-22. EPA found that the loss of aquatic species from increased conductivity was “a severe and clear effect.” *Id.* at A-37. EPA also conducted a detailed causal assessment and concluded that there is a causal relationship between conductivity and stream impairment in West Virginia. *Id.* at A-39. Finally, EPA’s benchmark report analyzed the relationship between the WVSCI biological impairment threshold and conductivity levels, and found that a WVSCI score of 64 (close to the impairment threshold of 68) corresponds to streams with conductivity of about 300 $\mu\text{S}/\text{cm}$ on average. *Id.* at A-36. A statistical analysis included in the benchmark determined that at a conductivity level of 300 $\mu\text{S}/\text{cm}$ a stream is 59% likely to be impaired and at 500 $\mu\text{S}/\text{cm}$ a stream is 72% likely to be impaired. *Id.*

This benchmark is supported by more recent peer-reviewed studies. Cormier, *et al.*, Derivation of a Benchmark for Freshwater Ionic Strength, *Environmental Toxicology and Chemistry*, 32(2): 263-271 (2013), and references cited therein; Bernhardt, *et al.*, “How Many Mountains Can We Mine? Assessing the Regional Degradation of Central Appalachian Rivers

by Surface Coal Mining,” *Environmental Science & Technology*, 46 (15), pp. 8115–8122 (2012). The latter study’s authors concluded that:

The extent of surface mining within catchments is highly correlated with the ionic strength and sulfate concentrations of receiving streams. Generalized additive models were used to estimate the amount of watershed mining, stream ionic strength, or sulfate concentrations beyond which biological impairment (based on state biocriteria) is likely. We find this threshold is reached once surface coal mines occupy >5.4% of their contributing watershed area, ionic strength exceeds $308 \mu\text{S cm}^{-1}$, or sulfate concentrations exceed 50 mg L^{-1} .

The Hardway Branch watershed is approximately 1,125 acres. Together Alex’s Hardway Branch and PGM Surface Mines cover approximately 270 acres, or nearly 25% of the watershed.

Alex has been monitoring ionic pollution and biological health in Hardway Branch since before mining began. The attached map shows the company’s two monitoring locations, indicated on the map below. *See Appendix A*. One site is immediately below Valley Fill 3 (HWB-9) and one several hundred yards downstream (HWB-8), after the confluence of an unaffected tributary—Peter’s Creek. Because of the location of HWB-9, represents contributions from Valley Fill 3 alone.

Before the first mining permit was issued in 2002, conductivity levels in Hardway Branch were consistently low and WVSCI scores were in the 80’s. Since mining has begun conductivity has increased well beyond the levels considered harmful by EPA and WVSCI scores have shown the stream to be impaired. The following data was taken from Alex’s own stream monitoring reports. WVSCI scores at point HWB-8 are elevated because of the influence of drift from Peters Creek, an unaffected tributary.

Year	HWB-8				HWB-9			
	WVSCI	Conduc.	Sulfates	TDS	WVSCI	Conduc	Sulfates	TDS
1999 F	85.7	-						
2000 S	88.1	221						
2000 F	82.7	320						
2001 F	75.2	357						
2002 F	84.3	-						
2003 S	84.7	266						
2004 F	82.7	1238						
2005 S	78.3	1128						
2005 F	61.8	1228						
2006 S	59	1238						
2006 F	84.2	516						
2007 S	51	600						
2009 S	59.4	1134	508	739	59.49	1,704	768	1370

2010 S	69.7	1433						
2011 S	59.1	1818	1040	1698	47.53	2290	1233	2263
2012 S	67.5	2100	1224	1997	41.63	2290	1393	2189

Background water quality data submitted with the mining permit applications confirm that pre-mining water quality was low in ionic pollution. In its application for Permit S3001-99 Alex conducted baseline water quality monitoring in Hardway Branch at two different sites. Site X-5 was placed to monitor background water quality at the head of Hardway Branch. Site X-10 was placed to monitor background water quality in the middle of Hardway Branch. The following represents the background water quality reported to WVDEP in the application.

Sample Site	Date	TDS (ppm)	Conductivity (μ S/cm)	Sulfates (ppm)
X-5	7/31/98	84	151	40
X-5	8/25/98	76	100	32
X-5	9/21/98	87	172	36
X-5	10/20/98	65	112	36
X-5	11/24/98	65	112	50
X-5	12/21/98	66	125	34
X-5	1/29/99	97	171	46
X-5	2/18/99	108	299	58
X-5	2/07/01	51	89	36
X-5	3/10/01	70	86	28
X-5	4/06/01	239	334	132
X-5	5/07/01	249	348	148
X-5	6/05/01	300	406	203
X-5	7/16/01	445	565	309
X-5	8/21/01	393	516	270
X-5	9/07/01	344	498	243
X-5	10/18/01	366	529	300
X-10	7/31/98	165	253	10
X-10	8/25/98	188	258	104
X-10	9/21/98	217	300	116
X-10	10/20/98	190	322	140
X-10	11/24/98	234	403	148
X-10	12/21/98	163	264	88
X-10	1/29/99	104	180	78
X-10	2/18/99	104	180	78
X-10	3/22/99	115	166	62
X-10	4/22/99	175	188	48

The ions below the discharge from Valley Fill 3 and in Hardway Branch are consistent with those associated with coal mining pollution in this region (Pond et al. 2008; Palmer et al. 2010; Bernhardt and Palmer 2011; Lindberg et al. 2012; Pond et al. 2010; Pond et al. 2012; Pond

et al. 2014; Kunz 2013). The ionic mixture of calcium, magnesium, sulfate, and biocarbonate in alkaline mine water causes the loss of aquatic macroinvertebrates in Appalachian areas where surface coal mining is prevalent; it is the mixture of ions that causes the biological impairment (Cormier et al. 2013b; Cormier and Suter 2013). This mixture also has significant adverse effects on fish assemblages (Hitt 2014; Hopkins 2013) and has toxic effects on aquatic life, including mayflies (Kunz 2013; Echols 2010; Kennedy 2004). In their collection of benthic data at monitoring point HWB-9, in 2011 Alex reported the following water chemistry.

Parameter	Value
Conductivity	2290 μ S/cm
TDS	2263 ppm
Hardness	1495 mg/l
Calcium	232 mg/l
Magnesium	222 mg/l
Sulfates	1233 mg/l

II. Legal Claims

A. Clean Water Act Violations

Section 301 of the CWA prohibits the discharge of any pollutant by any person, except in compliance with a permit. The WV/NPDES permits at issue in this notice allow Alex to discharge specified pollutants into West Virginia's waters. Noncompliance with an NPDES Permit constitutes a violation of the CWA. Sierra Club v. Powellton Coal Co., LLC, 662 F. Supp. 2d 514, 516 (S.D. W. Va. 2009). Citizens may sue any person who violates a term or condition of an NPDES Permit. Id. at 517. Alex's WV/NPDES Permit prohibits discharges that cause or materially contribute to violations of applicable water quality standards. 47 C.S.R. § 30-5.1.f. WVDEP defines its applicable water quality standards to include narrative standards. 47 C.S.R. § 2-3.2. In addition, federal regulations require states to issue NPDES permits that require compliance with "State narrative criteria for water quality." 40 C.F.R. §§ 122.44(d)(1), 123.25(a)(15).

Citizens may enforce this type of permit condition that requires compliance with narrative state water quality standards. Northwest Env'tl. Advocates v. City of Portland, 56 F.3d 979, 986-988 (9th Cir. 1995); New Manchester Resort & Golf, LLC v. Douglasville Development, LLC, 734 F. Supp.2d 1326, 1336-39 (N.D. Ga. 2010) (allowing citizen enforcement of narrative water quality standard prohibiting water discoloration); Swartz v. Beach, 229 F. Supp.2d 1239, 1270-72 (D. Wyo. 2002) (allowing citizen enforcement of narrative water quality standard prohibiting water degradation that causes a measurable decrease in crop or livestock production). "[S]tate standards, including narrative as opposed to numerical criteria, incorporated into an NPDES permit may be enforced through a citizens' suit." Gill v. LDI, 19 F. Supp. 2d 1188, 1195 (W.D. Wash. 1998).

West Virginia's narrative water quality standard provides that:

No . . . wastes present in any waters of the state shall cause therein or materially contribute to any of the following conditions thereof: . . .

3.2.e. Materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life; . . . and

3.2.i. Any other condition . . . which adversely alters the integrity of the waters of the State including wetlands; no significant adverse impacts to the chemical, physical, hydrologic, or biological components of aquatic ecosystems shall be allowed.

47 C.S.R. §§ 2-3.2.e & 2-3.2.i. Thus, the standard is violated if wastes discharged from a mining operation “cause” or “materially contribute” materials “that are harmful . . . or toxic to . . . aquatic life” or that have “significant adverse impacts to . . . biological components of aquatic ecosystems.” “Biological monitoring is one method of testing [for] compliance with narrative criteria.” American Paper Institute, 996 F.2d 346, 350 (D.C. Cir. 1993).

Alex’s discharges into Hardway Branch of Twentymile Creek from Outfall 29 of Permit WV1021907 have violated the “harmful . . . to . . . aquatic life” and “significant adverse impact” components of West Virginia’s narrative water quality standards. 47 C.S.R. §§ 2-3.2.e & 2-3.2.i. The company has measured the benthic community downstream from those discharges and found that the WVSCI scores are below the impairment threshold of 68. Instream sampling of the stream has shown high levels of ionic pollutants such as sulfates and high levels of conductivity, which are strongly associated with biological impairment and harm to aquatic life. HWB-9 is immediately below Outfall 029, which is the only stream source at that point. On information and belief, Plaintiffs allege that high levels of conductivity measured at that point and below are the result of discharges from Outfall 029.

Since Alex Energy’s Hardway Branch and PGM surface mines have discharged into Hardway Branch levels of ionic pollution has increased and the stream has become biologically impaired. Alex has therefore caused or materially contributed to, violations of the narrative water quality standards, its NPDES permit and the CWA. See Upper Chattahoochee Riverkeeper v. City of Atlanta, 986 F. Supp. 1406, 1427 (N.D. Ga. 1997) (city found liable for violating water quality standard for fecal coliform bacteria because its “discharges correlate generally (although not perfectly) with measurements of fecal coliform bacteria in the receiving streams that are thousands of times higher than they should be” and there was no “other source that is contributing such massive amounts of fecal coliform bacteria to explain the level of fecal coliform bacteria in the receiving streams below” its treatment facilities). Based on the available evidence, and the absence of any corrective measures taken by Alex we believe Alex’s violations are ongoing. If Alex does not cease these violations within 60 days, we intend to bring a citizen suit under Section 505 of the CWA.

B. Surface Mining Violations

Section 520(a)(1) of SMCRA authorizes citizens to commence civil actions against any person alleged to be in violation of rules, orders, or permits issued pursuant to SMCRA. 30

U.S.C. § 1270(a)(1). West Virginia has a federally-approved mining program under SMCRA which is administered by the WVDEP pursuant to the West Virginia Surface Coal Mining Reclamation Act (“WVSCMRA”), W. Va. Code § 22-3-1 through 32a. Powellton, 662 F. Supp. at 518. Violations of a federally-approved state program are enforceable in federal court under SMCRA’s citizen suit provision. Molinary v. Powell Mountain Coal Co., Inc., 125 F.3d 231, 237 (4th Cir. 1997). We believe that Alex is in continuous and ongoing violation of the following:

- (1) 38 C.S.R. § 2-14.5, promulgated under WVSCMRA;
- (2) 30 C.F.R. §§ 816.41(a) and 817.41(a), promulgated under SMCRA;
- (3) 30 C.F.R. §§ 816.42 and 817.42, promulgated under SMCRA;
- (4) The permit conditions incorporated into West Virginia Surface Mining Permit S005185 by operation of 38 C.S.R. § 2-3.33.c, promulgated under WVSCMRA.

Alex’s SMCRA-related violations began in at least the fall of 2005, when the company conducted a macroinvertebrate survey in Hardway Branch and resulted in a WVSCI score below 68.

Section 506 of SMCRA prohibits surface coal mining operations without a permit from the Office of Surface Mining Reclamation and Enforcement (“OSMRE”) or from an approved state regulatory authority. 30 U.S.C. § 1256. Alex holds mining permit S3001-99 from WVDEP for its Hardway Branch Surface Mine and mining permit S3014-05 for its PGM Surface Mine. The WVSCMRA provides that “[a]ny permit issued by the director pursuant to this article to conduct surface mining operations shall require that the surface mining operations meet all applicable performance standards of this article and other requirements set forth in legislative rules proposed by the director.” W. Va. Code § 22-3-13(a). In turn, WVDEP’s regulations under that statute provide that “[t]he permittee shall comply with the terms and conditions of the permit, all applicable performance standards of the Act, and this rule.” 38 C.S.R. § 2-3.33.c; Powellton, 662 F. Supp.2d at 518.

The federal performance standards under SMCRA mandate that all discharges from permitted mining operations “be made in compliance with all applicable State and Federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 C.F.R. Part 434. 30 C.F.R. §§ 816.42 & 817.42. The State program prescribes a similar standard: “Discharge from areas disturbed by surface mining shall not violate effluent limitations or cause a violation of applicable water quality standards.” 38 C.S.R. § 2-14.5.b (emphasis added).

As described above, Alex’s discharges from its Hardway Branch Surface Mine and PGM Surface Mine have caused violations of narrative water quality standards in Hardway Branch. Consequently, Alex is in violation of state and federal performance standards that prohibit mining from causing violations of water quality standards.

In addition, Alex’s mining operations have resulted in impermissible material damage to the hydrologic balance. The performance standards under WVSCMRA mandate that “[a]ll

surface mining and reclamation activities shall be conducted . . . to prevent material damage to the hydrologic balance outside the permit area.” 38 C.S.R. § 2-14.5. At a minimum, “material damage” includes violations of water quality standards. Ohio River Valley Environmental Coalition, Inc. v. Castle, Civ. No. 3:00-cv-0058, Memo. Opinion & Order at 12-13 (S.D. W. Va. June 14, 2000). Accordingly, the water quality standards violations described above constitute material damage to the hydrologic balance and are actionable in a SMCRA citizen suit against Alex.

In addition to contributing ionic pollution through effluent, large scale surface mines result in significant changes to the vegetation and landscape of a watershed. These changes to the landscape can also contribute to stresses upon aquatic insects. This is a concern in the Hardway Branch watershed because mining dominates a large percentage (nearly 25%) of the land. Habitat scores from HWB-9, reported by the company in 2011, indicate channel alteration and heavy sedimentation. These impacts result from Alex’s mining operation. Plaintiffs will allege, in the alternative that this habitat alteration, is causing or contributing to damage to the hydrologic balance outside the permit area and is actionable under SMCRA and WVSCMRA performance standards. 38 C.S.R. § 2-14.5; 38 C.S.R. § 2-33.c.

Moreover, Alex has a legal duty to treat its effluent to ensure that it does not violate water quality standards. Federal and State performance standards require that, “[i]f drainage control, restabilization and revegetation of disturbed areas, diversion of runoff, mulching, or other reclamation and remedial practices are not adequate to meet the requirements of this section and § 816.42, the operator shall use and maintain the necessary water-treatment facilities or water quality controls.” 30 C.F.R. § 816.41(d)(1); see also 38 C.S.R. § 2-14.5.c (“Adequate facilities shall be installed, operated and maintained using the best technology currently available in accordance with the approved preplan to treat any water discharged from the permit area so that it complies with the requirements of subdivision 14.5.b of this subsection.”) The violations identified herein show unequivocally that Alex’s existing treatment methods are insufficient to meet that requirement. Thus, the performance standards require Alex to construct systems that will effectively treat its effluent to levels that comply with all applicable water quality standards.

Finally, Alex’s violations of the performance standards that prohibit violations of water quality standards and material damage and that require adequate treatment to avoid such violations are violations of its mining permit S2005-02. By operation of 38 C.S.R. § 2-33.c, that permit incorporates the performance standards discussed in this letter as terms of the permit itself. Consequently, Alex is violating its SMCRA permits.

III. Conclusion

As discussed above, if Alex fails to come into compliance with the CWA, the terms of WV/NPDES permit WV1021907; SMCRA; surface mining regulations and the permit conditions of Surface Mining Permit S3001-99 and S3014-05, we intend to file a citizen suit under section 505(a)(1) of the CWA seeking civil penalties and injunctive relief, as well as a citizen suit under section 520(a)(1) of SMCRA seeking a court order compelling Alex to come into compliance with the law. Be aware that this notice is sufficient to sue Alex for

any post-notice violations related to the violations described herein. See generally, Public Interest Research Group of N.J., Inc. v. Hercules, Inc., 50 F.3d 1239 (3rd Cir. 1995).

If Alex has taken any steps to eradicate the underlying cause of the violations described above, or if Alex believes anything in this letter is inaccurate, please let us know. If Alex does not advise us of any remedial steps during the 60-day notice period, we will assume that no such steps have been taken and that violations are likely to continue. Additionally, we would be happy to meet with Alex or its representatives to attempt to resolve these issues within the 60-day notice period.

Sincerely,

/s/ J. Michael Becher

Mike Becher

Appalachian Mountain Advocates

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Sierra Club

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cc (via certified mail):

Secretary Randy Huffman

West Virginia Department of Environmental Protection

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(via first class mail):

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3 Parkway Center
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A detailed topographic map of the Jefferson area. The map features a grid of latitude and longitude lines. Contour lines are drawn at 100-foot intervals, with labels such as 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000. The map shows several roads, including Highway 17, Highway 18, Highway 19, Highway 20, Highway 21, Highway 22, Highway 23, Highway 24, Highway 25, Highway 26, Highway 27, Highway 28, Highway 29, Highway 30, Highway 31, Highway 32, Highway 33, Highway 34, Highway 35, Highway 36, Highway 37, Highway 38, Highway 39, Highway 40, Highway 41, Highway 42, Highway 43, Highway 44, Highway 45, Highway 46, Highway 47, Highway 48, Highway 49, Highway 50, Highway 51, Highway 52, Highway 53, Highway 54, Highway 55, Highway 56, Highway 57, Highway 58, Highway 59, Highway 60, Highway 61, Highway 62, Highway 63, Highway 64, Highway 65, Highway 66, Highway 67, Highway 68, Highway 69, Highway 70, Highway 71, Highway 72, Highway 73, Highway 74, Highway 75, Highway 76, Highway 77, Highway 78, Highway 79, Highway 80, Highway 81, Highway 82, Highway 83, Highway 84, Highway 85, Highway 86, Highway 87, Highway 88, Highway 89, Highway 90, Highway 91, Highway 92, Highway 93, Highway 94, Highway 95, Highway 96, Highway 97, Highway 98, Highway 99, Highway 100. The map also shows several geographical features, including Sugar Camp, Hardway Branch, Tonile Branch, and Jefferson. The map is oriented with North at the top.



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July 16, 2015

By Certified Mail – Return Receipt Requested

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President Alex Energy
2691 Little Birch Road
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Kevin S. Crutchfield, CEO
Alpha Natural Resources, Inc.
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Abingdon, VA 24212

Re: Supplemental 60-Day Notice of Intent to File Citizen Suit Under Clean Water Act Section 505(a)(1) for Violation of Terms and Conditions of West Virginia NPDES Permit WV1015362 and 60-Day Notice of Intent to File Citizen Suit Under the Federal Surface Mining Control and Reclamation Act Section 520(a)(1) for Violations of Federal and State Regulations and Permit Conditions of West Virginia Surface Mining Permits S3005-98 and S3018-06

Dear Mr. Griffith and Mr. Crutchfield:

The Sierra Club, Ohio Valley Environmental Coalition, Sierra Club and the West Virginia Highlands Conservancy (collectively, "the Sierra Club"), in accordance with section 505 of the Clean Water Act (the "Act" or the "CWA"), 33 U.S.C. § 1365, and 40 C.F.R. Part 135, hereby notify you that Alex Energy, Inc. ("Alex") has violated, and continues to violate, "an effluent standard or limitation" under Section 505(a)(1)(A) of the Act, 33 U.S.C. § 1365(a)(1)(A), by failing to comply with the terms and conditions of West Virginia/National Pollution Discharge Elimination System ("WV/NPDES") Permits WV1015362. If within sixty days of the postmark of this letter Alex does not bring itself into full compliance with the Act, we intend to file a citizens' suit seeking civil penalties for Alex's ongoing and continuing violations and for an injunction compelling it to come into compliance with the Act.

We further notify you, in accordance with section 520 of the federal Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. § 1270, and 30 C.F.R. § 700.13, that Alex is in ongoing and continuing violation of certain federal and state regulations promulgated under SMCRA and the West Virginia Surface Coal Mining and Reclamation Act ("WVSCRMA" or the "State Act") and certain permit conditions of its West Virginia Surface Mining Permits S3005-98 and S3018-96 as a result of its discharges of pollutants into Spruce Run, which is a tributary of Twentymile Creek and the

Gauley River. If, within sixty days, Alex does not bring itself into full compliance with SMCRA, the regulations promulgated under SMCRA and the WVSCMRA, and the Surface Mining Permit identified below, we intend to file a citizens' suit in federal court seeking an injunction compelling Alex to come into compliance with the applicable statutes, regulations, and permit.

This letter supplements our prior notice letter dated December 7, 2012.

I. FACTUAL BACKGROUND

On January 2, 2000, the West Virginia Department of Environmental Protection (WVDEP) issued West Virginia Surface Mining Permit No. S3005-98 to Alex for its 1696-acre Robinson North Surface Mine in Nicholas County, West Virginia. The permit was amended in 2002 and 2005 to add 142 acres and 558.6 acres, respectively, was renewed in 2005 and 2010, and is still in effect. Durable Rock Fill (DRF) G of Alex's Robinson North Surface Mine discharges into Pond G, which discharges through Outlet 012 into Spruce Run, a tributary of Twentymile Creek. On February 28, 2000, the U.S. Army Corps of Engineers authorized DRF G to fill 6620 linear feet of Spruce Run and encompass a drainage area (measured from the toe of the valley fills) of 156 acres. DRF G is the only valley fill and Alex's Robinson Fork and Spruce Run Surface Mines are the only development activities in the Spruce Run watershed.

WVDEP has also issued West Virginia Surface Mining Permit No. S3018-06 to Alex for its Spruce Run Surface Mine in Nicholas County, West Virginia. That mine is on the northern and eastern ridges of the Spruce Run watershed. It contributes discharges from disturbed areas into Pond G and Outlet 012.

On February 29, 2000, WVDEP issued to Alex WV/NPDES Permit No. WV1015362, which limits discharges from the Robinson North Surface Mine into Twentymile Creek and its tributaries, including Spruce Run. This permit was renewed in 2005 and 2010 and is still in effect. Part C of the permit incorporates by reference 47 CSR § 30-5.1.f, which provides that: "The discharge or discharges covered by a WV/NPDES permit are to be of such quality so as not to cause violation of applicable water quality standards adopted by the Department of Environmental Protection, Title 47, Series 2." WVDEP's narrative water quality standards prohibit discharges of "[m]aterials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life" or that cause "significant adverse impacts to the chemical, physical, hydrologic, or biological components of aquatic ecosystems." 47 C.S.R. §§ 2-3.2.e & 2-3.2.i.

Alex has monitored the water quality at the Outlet 012 (PM-211), at monitoring point AW-17 in lower Spruce Run, and at monitoring point S-20 at the mouth of Spruce Run prior to its confluence with Twentymile Creek. In its NPDES permit application, Alex reported the following values for conductivity, bicarbonate, pH and sulfate at AW-17 and S-20:

Sample Point	Sample Date	pH	Alkalinity as CaCO ₃	Conductivity (µ/S)	Sulfate (mg/l)
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AW-17	6/28/94	6.30	69	41	12
AW-17	7/21/94	6.80	7	41	7
AW-17	8/30/94	6.50	6	44	4
AW-17	9/26/94	6.30	7	45	16
AW-17	10/26/94	6.70	6	50	3
AW-17	11/15/94	6.40	6	41	9
S-20	10/31/97	6.36	2	50	14
S-20	11/17/97	6.77	2	61	13
S-20	12/29/97	5.63	2	50	8
S-20	1/17/98	6.03	1	58	13
S-20	2/17/98	5.76	1	51	14
S-20	3/17/98	6.96	1	51	18

WVDEP's 1999 CHIA for S3005-98 summarized these sampling results, stating that sulfate concentrations in Spruce Run were in the 3-18 mg/l range and "that this tributary had not been impacted at the date of the analyses." CHIA, pp. 13-14. After that time, Alex began mining at its Robinson North Surface Mine and built DRF G and Pond G in Spruce Run.

In March 2009, Alex's consultant, Research Environmental and Industrial Consultants (REIC), sampled the benthic macroinvertebrates and water chemistry in Spruce Run just before its confluence with Twentymile Creek. REIC measured "extremely elevated levels of conductivity (2,270 μ S), hardness (1,420 mg/L), sulfate (1,340 mg/L), TDS (1,630 mg/L), and magnesium (205 mg/l)." May 11, 2009 REIC Report, pp. 34, 65, 72. REIC stated that "the highly elevated levels of conductivity, sulfate, TDS, magnesium, and hardness were far outside of recommended thresholds, and would be severely limiting to sensitive taxa of aquatic insects." Id. REIC calculated the West Virginia Stream Condition Index (WVSCI) score during this sampling event as 53.80, which indicates biological impairment. Id. at 50. REIC found "an unbalanced and somewhat unhealthy macroinvertebrate community," including an absence of mayflies. REIC concluded that "the poor WVSCI score, along with the absence of mayflies, were indications of poor water quality and/or undesirable aquatic habitat at this station." Id. at 51. In addition, REIC stated that "[h]abitat on this stream was exceptionally desirable, and would have resulted in a very good benthic population, had water quality been more favorable. A complete lack of mayflies and reductions in stonefly and caddisfly resulted, and led to a low WVSCI score." Id. at 57. REIC stated that, using EPA's Rapid Bioassessment Protocol for habitat evaluations, the Spruce Run station "scored 191 out of a possible 200, and would provide optimal aquatic habitat." Id. at 15, 39.

On October 7, 2009, WVDEP sampled the water in Spruce Run at the toe of DRF G, which is a half mile upstream from its confluence with Twentymile Creek. WVDEP reported the following chemistry results:

Parameter	Result
pH (SU)	6.47
Hardness (mg/l)	2,820
Bicarbonate (mg/l)	225
Chloride (mg/l)	40
Sulfate (mg/l)	2360
TSS (mg/l)	2
TDS (mg/l)	3400
Total Calcium (mg/l)	400
Total Iron (mg/l)	0.05
Total Manganese (mg/l)	0.713
Total Magnesium (mg/l)	442
Potassium (mg/l)	26.3
Sodium (mg/l)	10.2

Thus, conductivity and sulfate concentrations had increased about fifty times more than the maximum baseline values.

In June 2011, Alex's consultant, David Wilson, sampled the benthic macroinvertebrates and water chemistry in Spruce Run approximately 100 feet upstream from its confluence with Twentymile Creek. Wilson calculated the WVSCI score to be 51.03, which indicates biological impairment. He calculated the RBP habitat score to be 149.

In June 2012, Alex's consultant, David Wilson, again sampled the benthic macroinvertebrates and water chemistry in Spruce Run approximately 100 feet upstream from its confluence with Twentymile Creek. Wilson calculated the WVSCI score to be 48.53, which indicates biological impairment. He calculated the RBP habitat score to be 103.

On May 30, 2013, Alex measured WVSCI of 44.90 and conductivity of 3,190 in Spruce Run. On September 30, 2013, Alex measured WVSCI of 61.66 in Spruce Run.

Analysis of the specific species listed in Alex's table benthic sampling results since 2009 shows a nearly complete absence of mayflies, with the only positive result being four mayflies of one species found in 2011:

TABLE 4. Total abundances and sensitivities of the 200-count benthic subsample used to calculate the WV-SCI score for benthic sites associated with Spruce Run. The (value/value) represents the number of grids within the sample picked to obtain the 200-subcount.

TAXON	SAMPLING STATION			
	2009	2011 (30/100)	2012 (38/100)	2013 (34/100)
Insecta				
Ephemeroptera (Mayflies)				
Baetidae				
Acentrella (F)		4		

Alex's chemistry results from its 2011-13 sampling are summarized below:

	2009	2011	2012	2013
PARAMETER				
pH (SU)	7.29	8.3	8.25	7.37
Conductivity (µS)	2,270	3,390	3,440	3,190
Dissolved Oxygen (mg/l)	11.7	8.4	-	8.6
Temperature (°C)	8.6	20.9	21	19.4
Flow (ft ³ /s)	0.979	0.62		
Dissolved Aluminum (mg/l)	0.102	0.048	0.026	0.08
Dissolved Iron (mg/l)	0.075	0.04	0.07	0.08
Dissolved Manganese (mg/l)	0.401	0.05	0.06	0.06
Aluminum (mg/l)	0.134	0.05	0.03	0.08
Calcium (mg/l)	232	378.4	360.5	352.8
Iron (mg/l)	0.075	0.06	0.08	0.1
Magnesium (mg/l)	205	382.1	389.1	388.4
Manganese (mg/l)	0.466	0.1	0.07	0.06
Selenium (mg/l)	0.0061	0.00784	0.00254	0.00133
Total Hardness (mg/l)	1,420	2,518.35	1,602.31	2,480.37
Mercury (mg/l)	<0.00100	<0.00010	<0.00010	<0.00010
Chloride (mg/l)	3.25	3.42	4.56	3.48
Sulfate (mg/l)	1,340	2112.96	2305.84	1998.63
Nitrate/Nitrite (mg/l)	2.34	0.75	0.44	0.27
Phosphorus (mg/l)	0.02	<0.02	<0.02	<0.02
TDS (mg/l)	1,630	3844	3665	3270
TSS (mg/l)	6	<2.00	2	4
Acidity (mg/l)	3	<0.63	<0.63	<0.63
Alkalinity (mg/l)	112	171.76	177.33	165.47

In its permit renewal application for reissuance of its 2013 WV/NPDES permit WV1015362, Alex sampled and measured the following discharges from Outlet 012 on March 5, 2013:

PARAMETER	RESULT	UNIT
Field pH	7.58	SU
Total Alkalinity	170.1	mg/l
Total Acidity	< 0.63	mg/l
Turbidity	2.9	NTU
Specific Conductance	4380	µS/cm
Total Sulfates	2248.72	mg/l
Chlorides	4.45	mg/l
Nitrate-N	0.71	mg/l

Total Iron	0.13	mg/l
Total Manganese	0.19	mg/l
Total Aluminum	0.02	mg/l
Dissolved Aluminum	0.01	mg/l
Total Sodium	10.08	mg/l
Total Magnesium	379.9	mg/l
Total Calcium	341.3	mg/l
Total Hardness	2416.68	mg/l
Total Suspended Solids	<2.00	mg/l
Total Dissolved Solids	3450	mg/l
Temperature	6.1	Deg. C
Flow	330	gpm

On September 30, 2013, notifiers sampled Spruce Run at and below Outlet 012 and obtained the following results:

PARAMETER	Outlet 012	Spruce Run below Outlet 012	Units
Field pH	7.44	8.15	SU
Specific Conductance	3204	3043	µS/cm
Sulfate	2300	2300	mg/l
Chlorides	3	5	mg/l
Nitrate-N	0.6	0.46	mg/l
Total Iron	ND	ND	mg/l
Total Manganese	0.23	ND	mg/l
Total Aluminum	ND	ND	mg/l
Total Calcium	290	280	mg/l
Total Suspended	ND	ND	mg/l
Temperature	17.18	16.71	Deg. C

The measured WVSCI score on that date was 53.22.

The data for Spruce Run and Outlet 012 show that the mining operation and valley fill at the Spruce Run site are causing significant impairment to Spruce Run. Levels of chemical pollution are very high and biological impairment serious, yet habitat is not sufficiently poor to have caused the level of biological impairment.

Scientific research has shown that levels of conductivity above ~300 uS/cm and elevated ionic pollution such as high sulfate levels are common below Appalachian mine sites and lead to extirpation of invertebrate genera (EPA 2011; Bernhardt et al. 2012; Cormier and Suter 2013; Cormier et al. 2013a). In 2011, EPA scientists summarized the existing science connecting conductivity and biological degradation in an EPA report entitled, "A Field-Based Aquatic Life

Benchmark for Conductivity in Central Appalachian Streams.” That report, which was peer-reviewed by top scientists on EPA’s Science Advisory Board, used EPA’s standard method for deriving water quality criteria to derive a conductivity benchmark of 300 $\mu\text{S}/\text{cm}$. *Id.* at xiv-xv. According to the species sensitivity distribution in the benchmark, on average, five percent of species are lost when conductivity rises to 295 $\mu\text{S}/\text{cm}$, over 50% are lost at 2000 $\mu\text{S}/\text{cm}$, and close to 60% are lost at 3000 $\mu\text{S}/\text{cm}$. *Id.* at 18. EPA considered potential confounding factors, including habitat, temperature, deposited sediments and pH, and concluded that none of them altered the relationship between conductivity and biological decline or the benchmark value of 300 $\mu\text{S}/\text{cm}$. *Id.* at 41, B-22. EPA found that the loss of aquatic species from increased conductivity was “a severe and clear effect.” *Id.* at A-37. EPA also conducted a detailed causal assessment and concluded that there is a causal relationship between conductivity and stream impairment in West Virginia. *Id.* at A-39. Finally, EPA’s benchmark report analyzed the relationship between the WVSCI biological impairment threshold and conductivity levels, and found that a WVSCI score of 64 (close to the impairment threshold of 68) corresponds to streams with conductivity of about 300 $\mu\text{S}/\text{cm}$ on average. *Id.* at A-36. A statistical analysis included in the benchmark determined that at a conductivity level of 300 $\mu\text{S}/\text{cm}$ a stream is 59% likely to be impaired and at 500 $\mu\text{S}/\text{cm}$ a stream is 72% likely to be impaired. *Id.*

The ions found coming out Outlet 012 and in Spruce Run are consistent with those associated with coal mining pollution in this region (Pond et al. 2008; Palmer et al. 2010; Bernhardt and Palmer 2011; Lindberg et al. 2012; Pond et al. 2010; Pond et al. 2012; Pond et al. 2014; Kunz 2013). The ionic mixture of calcium, magnesium, sulfate, and biocarbonate in alkaline mine water causes the loss of aquatic macroinvertebrates in Appalachian areas where surface coal mining is prevalent; it is the mixture of ions that causes the biological impairment (Cormier et al. 2013b; Cormier and Suter 2013). This mixture also has significant adverse effects on fish assemblages (Hitt 2014; Hopkins 2013) and has toxic effects on aquatic life, including mayflies (Kunz 2013; Echols 2010; Kennedy 2004).

Bernhardt et al. (2012) concluded that:

The extent of surface mining within catchments is highly correlated with the ionic strength and sulfate concentrations of receiving streams. Generalized additive models were used to estimate the amount of watershed mining, stream ionic strength, or sulfate concentrations beyond which biological impairment (based on state biocriteria) is likely. We find this threshold is reached once surface coal mines occupy >5.4% of their contributing watershed area, ionic strength exceeds 308 $\mu\text{S cm}^{-1}$, or sulfate concentrations exceed 50 mg L^{-1} .

DRF G is the only valley fill and Alex’s Robinson Fork and Spruce Run Surface Mines are the only development activities in the Spruce Run watershed. Pond G below DRF G drains a total watershed in Spruce Run of 264 acres, of which 206 acres (78% of the watershed) are disturbed by the Robinson Fork mine. Permit App., p. P-5. Much of the remaining watershed has been or will be disturbed by the Spruce Run Surface Mine.

In sum, the available evidence shows that, for at least the last decade and as a result of Alex's mining operations at its Robinson North Surface Mine, Spruce Run has had elevated chemical ions, including sulfate, calcium, magnesium, and bicarbonate, measured as increased conductivity, and biologically impaired aquatic life. Since Spruce Run is a tributary of Twentymile Creek, that creek has also suffered from increased pollutants as a result of Alex's mining operations.

In addition, because of solar heating of the sediment control pond upstream of the Outlet 012, the mine has discharged a pollutant (i.e., heat) that has caused or materially contributed to increased temperature in Spruce Run which may be a contributing factor to the observed biological impairment. The mine has also discharged other pollutants from Outlet 012 (e.g., manganese, iron and other dissolved solids) that degrade the habitat of Spruce Run by causing or materially contributing to increased embeddedness of the stream substrate, which may be another contributing factor to the observed biological impairment. These discharges and violations began when the mine began operating and are continuing.

II. CLEAN WATER ACT VIOLATIONS

Noncompliance with an NPDES Permit constitutes a violation of the CWA. Sierra Club v. Powellton Coal Co., LLC, 662 F. Supp. 2d 514, 516 (S.D. W. Va. 2009). Citizens may sue any person who violates a term or condition of an NPDES Permit. Id. at 517. Alex's WV/NPDES Permit prohibits discharges that cause violations of applicable water quality standards. 47 C.S.R. § 30-5.1.f. WVDEP defines its applicable water quality standards to include narrative standards. 47 C.S.R. § 2-3.2. In addition, federal regulations require states to issue NPDES permits that require compliance with "State narrative criteria for water quality." 40 C.F.R. §§ 122.44(d)(1), 123.25(a)(15).

Citizens may enforce this type of permit condition that requires compliance with narrative state water quality standards. Northwest Env'tl. Advocates v. City of Portland, 56 F.3d 979, 986-988 (9th Cir. 1995); New Manchester Resort & Golf, LLC v. Douglasville Development, LLC, 734 F. Supp.2d 1326, 1336-39 (N.D. Ga. 2010) (allowing citizen enforcement of narrative water quality standard prohibiting water discoloration); Swartz v. Beach, 229 F. Supp.2d 1239, 1270-72 (D. Wyo. 2002) (allowing citizen enforcement of narrative water quality standard prohibiting water degradation that causes a measurable decrease in crop or livestock production); . "[S]tate standards, including narrative as opposed to numerical criteria, incorporated into an NPDES permit may be enforced through a citizens' suit." Gill v. LDI, 19 F. Supp. 2d 1188, 1195 (W.D. Wash. 1998).

West Virginia's narrative water quality standard provides that:

No . . . wastes present in any waters of the state shall cause therein or materially contribute to any of the following conditions thereof: . . .

3.2.e. Materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life; . . . and

3.2.i. Any other condition . . . which adversely alters the integrity of the waters of the State including wetlands; no significant adverse impacts to the chemical, physical, hydrologic, or biological components of aquatic ecosystems shall be allowed.

47 C.S.R. §§ 2-3.2.e & 2-3.2.i. Thus, the standard is violated if wastes discharged from a mining operation “cause” or “materially contribute” materials “that are harmful . . . or toxic to . . . aquatic life” or that have “significant adverse impacts to . . . biological components of aquatic ecosystems.” “Biological monitoring is one method of testing [for] compliance with narrative criteria.” American Paper Institute, 996 F.2d 346, 350 (D.C. Cir. 1993).

Alex’s discharges of an ionic mixture of chemicals, including sulfate, calcium, magnesium, and bicarbonate, measured as conductivity, into Spruce Run have violated the “harmful . . . to . . . aquatic life” and “significant adverse impact” components of this narrative standard. Since 2009, Alex has measured the benthic community at the mouth of Spruce Run downstream from Alex’s discharges from Outlet 012 and found that the WVSCI score was below 68, the threshold above which a stream is not biologically impaired. Alex’s instream sampling of Spruce Run has also continued to show high levels of ionic chemicals such as sulfates and high levels of conductivity, which are strongly associated with biological impairment and harm to aquatic life.

Since Alex’s Robinson Fork and Spruce Run mines are the only development activity in the Spruce Run watershed, they have caused, or materially contributed to, violations of the narrative state water quality standards, its NPDES permit and the CWA. See Upper Chattahoochee Riverkeeper v. City of Atlanta, 986 F. Supp. 1406, 1427 (N.D. Ga. 1997) (city found liable for violating water quality standard for fecal coliform bacteria because its “discharges correlate generally (although not perfectly) with measurements of fecal coliform bacteria in the receiving streams that are thousands of times higher than they should be” and there was no “other source that is contributing such massive amounts of fecal coliform bacteria to explain the level of fecal coliform bacteria in the receiving streams below” its treatment facilities).

III. SMCRA VIOLATIONS

Section 520(a)(1) of SMCRA authorizes citizens to commence civil actions against any person alleged to be in violation of rules, orders, or permits issued pursuant to SMCRA. 30 U.S.C. § 1270(a)(1). West Virginia has a federally-approved mining program under SMCRA which is administered by the WVDEP pursuant to the West Virginia Surface Coal Mining Reclamation Act (“WVSCMRA”), W. Va. Code § 22-3-1 through 32a. Powellton, 662 F. Supp. at 518. Violations of a federally-approved state program are enforceable in federal court under SMCRA’s citizen suit provision. Molinary v. Powell Mountain Coal Co., Inc., 125 F.3d 231, 237 (4th Cir. 1997). The Sierra Club alleges that Alex is in continuous and ongoing violation of the following:

- (1) 38 C.S.R. § 2-14.5, promulgated under WVSCMRA;

- (2) 30 C.F.R. §§ 816.41(a) and 817.41(a), promulgated under SMCRA;
- (3) 30 C.F.R. §§ 816.42 and 817.42 promulgated under SMCRA;
- (4) The permit conditions incorporated into West Virginia Surface Mining Permits S300598 and S301806.

Alex's SMCRA-related violations began by at least March 2009, when its discharges from its Robinson North Surface Mine and Spruce Run Surface Mine were measured to be causing violations of water quality standards.

Section 506 of SMCRA prohibits surface coal mining operations without a permit from the Office of Surface Mining Reclamation and Enforcement ("OSMRE") or from an approved state regulatory authority. 30 U.S.C. § 1256. Alex holds mining permit S3005-98 and S3018-06 from WVDEP for its Robinson Fork and Spruce Run Surface Mines. The WVSCMRA provides that "[a]ny permit issued by the director pursuant to this article to conduct surface mining operations shall require that the surface mining operations meet all applicable performance standards of this article and other requirements set forth in legislative rules proposed by the director." W. Va. Code § 22-3-13(a). In turn, WVDEP's regulations under that statute provide that "[t]he permittee shall comply with the terms and conditions of the permit, all applicable performance standards of the Act, and this rule." 38 C.S.R. § 2-3.33.c; Powellton, 662 F. Supp.2d at 518.

The federal performance standards under SMCRA mandate that all discharges from permitted mining operations "be made in compliance with all applicable State and Federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 C.F.R. Part 434. 30 C.F.R. §§ 816.42 & 817.42. The State program prescribes a similar standard: "Discharge from areas disturbed by surface mining shall not violate effluent limitations or cause a violation of applicable water quality standards." 38 C.S.R. § 2-14.5.b (emphasis added).

As described above, Alex's discharges from its surface mines into Spruce Run have caused violations of the narrative water quality standards that prohibit discharges of "[m]aterials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life" or that cause "significant adverse impacts to the chemical, physical, hydrologic, or biological components of aquatic ecosystems." 47 C.S.R. §§ 2-3.2.e & 2-3.2.i. Consequently, Alex is in violation of the state and federal performance standards that prohibit mining operations from causing violations of water quality standards.

In addition, Alex's mining operations have resulted in impermissible material damage to the hydrologic balance. The performance standards under WVSMCRA mandate that "[a]ll surface mining and reclamation activities shall be conducted . . . to prevent material damage to the hydrologic balance outside the permit area." 38 C.S.R. § 2-14.5. At a minimum, "material damage" includes violations of water quality standards. Ohio River Valley Environmental Coalition, Inc. v. Castle, Civ. No. 3:00-cv-0058, Memo. Opinion & Order at 12-13 (S.D. W. Va. June 14, 2000). Accordingly, the water quality standards violations described above constitute

material damage to the hydrologic balance and are actionable in a SMCRA citizen suit against Alex.

Moreover, Alex has a legal duty to treat its effluent to ensure that it does not violate water quality standards. Federal and State performance standards require that, “[i]f drainage control, restabilization and revegetation of disturbed areas, diversion of runoff, mulching, or other reclamation and remedial practices are not adequate to meet the requirements of this section and § 816.42, the operator shall use and maintain the necessary water-treatment facilities or water quality controls.” 30 C.F.R. § 816.41(d)(1); see also 38 C.S.R. § 2-14.5.c (“Adequate facilities shall be installed, operated and maintained using the best technology currently available in accordance with the approved preplan to treat any water discharged from the permit area so that it complies with the requirements of subdivision 14.5.b of this subsection.”) The violations identified herein show unequivocally that Alex’s existing treatment methods are insufficient to meet that requirement. Thus, the performance standards require Alex to construct systems that will effectively treat its effluent to levels that comply with all applicable water quality standards.

Finally, Alex’s violations of the performance standards that prohibit violations of water quality standards and material damage and that require adequate treatment to avoid such violations are violations of Surface Mining Permits S300598 and S301806. By operation of 38 C.S.R. § 2-33.c, those surface mining permits incorporate the performance standards discussed in this letter as terms of the permits. Consequently, Alex is violating its SMCRA permits.

IV. CONCLUSION

As discussed above, if Alex fails to come into compliance with the Clean Water Act, SMCRA, and its permits under those two statutes, we intend to file a citizen suit under section 505(a)(1) of the Clean Water Act seeking civil penalties and injunctive relief, as well as a citizen suit under section 520(a)(1) of SMCRA seeking a court order compelling Alex to come into compliance with the law. Be aware that this notice is sufficient to allow us to sue Alex for any post-notice violations related to the violations described herein. See generally, Public Interest Research Group of N.J., Inc. v. Hercules, Inc., 50 F.3d 1239 (3rd Cir. 1995).

If Alex has taken any steps to eradicate the underlying cause of the violations described above, or if Alex believes that anything in this letter is inaccurate, please let us know. If Alex does not advise us of any remedial steps during the 60-day period, we will assume that no such steps have been taken and that violations are likely to continue. Additionally, we would be happy to meet with Alex or its representatives to attempt to resolve these issues within the 60-day notice period.

Sincerely,

/s/ J. Michael Becher

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References

- Bernhardt, E. S., B. D. Lutz, R. S. King, A. M. Helton, C. A. Carter, J. P. Fay, D. Campagna, J. Amos. 2012. How many mountains can we mine? Assessing the regional degradation of Central Appalachian rivers by surface coal mining. *Environmental Science & Technology* 46: 8115–8122.
- Cormier, S. M. and G. W. Suter. 2013. A method for deriving water-quality benchmarks using field data. *Env. Tox. Chem* 32:255-262.
- Cormier S.M., SuterGWII, and Zheng L. 2013a. Derivation of a benchmark for freshwater ionic strength. *Environ Toxicol Chem* 32:263–271.
- Cormier S.M. and G.W. Suter. 2013c. A method for assessing causation of field exposure-response relationships. *Environ Toxicol Chem* 32:272–276.
- Cormier S.M., G.W. Suter, L. Zheng, and G. J. Pond. 2013b. Assessing causation of the extirpation of stream macroinvertebrates. *Environmental Science and Technology* 32(2): 277-287.
- Cormier S., S. P. Wilkes, and L. Zheng. 2013e. Relationship of land use and elevated ionic strength in Appalachian watersheds. *Env. Tox. Chem* 32:296-303.
- Echols, B.S., R.J. Currie, D.S. Cherry. 2010. Preliminary results of lab toxicity tests with the mayfly, *Isonychia bicolor* for development as a standard test organism for evaluating streams in the Appalachian coalfields of Virginia and West Virginia. *Env. Monit. Assessment*.
- EPA (2011) A Field-based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams; EPA/600/R-10/023F; Office of Research and Development, National Center for Environmental Assessment: Washington, DC, 2011. Available online from <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=220171>.
- Hitt, N.P., and Chambers, D.B. 2014. Temporal changes in taxonomic and functional diversity of fish assemblages downstream from mountaintop mining. *Freshwater Science* 33(3).
- Hopkins, R. L., and J. C. Roush. 2013. Effects of mountaintop mining on fish distributions in central Appalachia. *Ecology of Freshwater Fish* 22:578–586.
- Kennedy, A.J. Cherry, D.S., Currie, R.J. 2004. Evaluation of ecologically relevant bioassays for a lotic system impacted by a coal-mine effluent, using *Isonychia*. *Environ Monit Assess* 95:37-55.
- Kunz, Use of Reconstituted Waters to Evaluate Effects of Elevated Major Ions Associated with Mountaintop Coal Mining on Freshwater Invertebrates. 2013. *Environmental Toxicology and Chemistry*, 32:12, pp. 2826-35.

- Lindberg, T. T.; Bernhardt, E. S.; Bier, R.; Helton, A. M.; Merola, R. B.; Vengosh, A.; Di Giulio, R. T. 2012. Cumulative impacts of mountaintop mining on an Appalachian watershed. *Proc. Natl. Acad. Sci. U.S.A.* 2011, 108 (52), 20929–20934.
- Palmer, M. A.; Bernhardt, E. S.; Schlesinger, W. H.; Eshleman, K. N.; Foufoula-Georgiou, E.; Hendryx, M. S.; Lemly, A. D.; Likens, G. E.; Loucks, O. L.; Power, M. E.; White, P. S.; Wilcock, P. R. (2010) Mountaintop Mining Consequences. *Science* 2010, 327 (5962), 148-149.
- Pond, G. J.; Passmore, M. E.; Borsuk, F. A.; Reynolds, L.; Rose, C. J. 2008. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools. *J. North Am. Benthological Soc.* 2008, 27(3), 717–737.
- Pond, G. 2010. Patterns of Ephemeroptera taxa loss in Appalachian 3 headwater streams (Kentucky, USA) *Hydrobiologia*. 641: 185–201.
- Pond, G. 2012. Biodiversity loss in Appalachian headwater streams: Plecoptera and Trichoptera communities. *Hydrobiologia* 679: 97-117.
- Pond, G.J., J.E. Bailey, B.M. Lowman, and M.H. Whitman. 2013. Calibration and validation of a regionally and seasonally stratified macroinvertebrate index for West Virginia wadeable streams. *Environ. Monitoring Assess* 185:1515–1540.
- Pond, G.J., M.E. Passmore, N.D. Pointon, J.K. Felbinger, C.A. Walker, K.J.G. Krock, J.B. Fulton, and W.L. Nash, Long-term Impacts on Macroinvertebrates Downstream of Reclaimed Mountaintop Mining Valley Fills in Central Appalachia, *Env. Mgmt.* July 3, 2014 (available online at <http://link.springer.com/article/10.1007%2Fs00267-014-0319-6>).
- Suter, G.W. and S.M. Cormier. 2013. A method for assessing the potential for confounding applied to ionic strength in central Appalachian streams. *Environmental Toxicology & Chemistry* 32: 288-295.